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Algorithm of Diagnosis, Pathogenetic Treatment and Prevention of Acute Diarrhea in Early Children

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ABSTRACT: This article presents diagnostic algorithms, pathogenetic treatment and prevention of acute infectious bowel diseases occurring in young children. It is known that the etiology of diarrhea in children is diverse. It is necessary to carry out diagnostics, differential diagnosis and treatment of patients. In treatment, first of all, the algorithm of actions from simplicity to complexity is important. The use of Enterol with Ersefuril increases the effectiveness of treatment, has a good effect on the profile of antibacterial diarrhea and intrauterine infections.
Key words: diagnostic algorithm, acute infectious diseases, diarrhea, enterol, ersefuril.

INTRODUCATION

In recent years, according to WHO, bacterial and viral diarrhea are the most common among infectious diseases. The problem of acute intestinal disease (ACI) is one of the most pressing health issues. On the one hand, the incidence rate remains quite high, with no significant decline. On the other hand, the appearance of pathogenic serovars leads to a severe course of the disease [6]. One of the areas that requires in-depth study is the age-related course of the disease, the assessment of clinical symptoms, and the knowledge of the consequences of the disease. In most children with diarrhea, the pathological process is moderate, with damage to the colon. The disease is accompanied by pronounced intoxication syndrome, fever and severe local syndrome [9].

The development of bacterial intestinal infections begins when microorganisms enter the digestive tract with water and food. Pathogens multiply in the intestinal cavity and their toxins (exo- or endotoxins) begin to be released. Under the influence of these toxins, the clinical symptoms vary depending on the pathogenesis of the disease [3]. Diarrhea in children is characterized by the rapid development of dehydration, the rapid appearance of symptoms, the development of complications [5].

The current importance of diarrhea in children is determined not only by their prevalence, but also by the high rate of post-disease complications. Articles about the violation of the microbiocenosis are frequent in the modern literature. There are data on the symptoms of diarrhea in patients with imbalance of the immune system, reactive changes in pancreatic tissue, functional disorders of the bile ducts, lactase deficiency, long-term disorders of the functional activity of the digestive system. The results of the observation of gastroenterologists show that in the majority of children in gastroenterological pathology various parts of the gastrointestinal tract are affected. The authors identified acute and chronic infectious diseases as the main reason for the development of digestive pathology. In particular, intestinal dysbiosis and reactive pancreatitis are high [4].

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The use of many antibiotics, immunosuppressants, and other chemicals for therapeutic purposes weakens the protective function and disrupts the intestinal microflora. In such cases, it is very important to use medications that are an alternative to antibiotics that reduce the side effects of aggressive chemotherapy. One of the pathogenetic means to improve the microecological condition of the small and large intestine is the drug Enterole, which has several advantages (enhances the immune response in the intestinal mucosa, stops the activity of pathogens, strengthens the density of enterocytes, neutralizes bacterial and viral factors). In addition, the restoration of the microbiocenosis determines the optimal therapeutic goal for various types of diarrhea. Here, Enterol performs a sufficiently selective detoxification function [8].

Among probiotics, Enterol is increasingly used. This drug contains non-pathogenic yeast saccharomycetes (Saccharomyces boulardii) derived from tropical plants. It lives and multiplies at 370C above normal, which is the same temperature as the temperature in the gut. It lives a long time at this temperature. Enterol preservatives belong to ascomycetes that are genetically resistant to all antibiotic groups, sulfonamides and other antimicrobial agents [2]. Antatomo-physiological features of the gastrointestinal tract, lack of immunological mechanisms and non-specific resistance factors determine the diversity of the clinic of bacterial and viral intestinal infections [1].

The course of severe forms of acute intestinal disease in children of different ages and bacterial carriage for a long time has been one of the current health problems. The reasons for this are eating disorders, foci of chronic infection, organic damage to the central nervous system, constitutional abnormalities, disorders of the microbiocenosis, which increase the duration of the disease and play an important role in the occurrence of unpleasant complications. Self-medication started at home can also cause a number of complications. In order to prevent the complication of infectious diarrhea, it is advisable to choose the right antibacterial and antiviral drugs, start rehydration therapy early, recommend a complex treatment in combination with enterosorbent [7].

The purpose of the study: Development of an algorithm for the diagnosis, pathogenetic treatment and prevention of acute infectious diarrhea in young children.

MATERIALS AND METHODS

First-year children with acute intestinal diseases of various etiologies were selected for our study. There were 40 patients in the main group.

Diagnosis should focus on the frequency and duration of stool, fever, vomiting, and abdominal pain or bloody stools. Parents are asked when was the last time antibacterial therapy was given. The patient's diet is also important. Constipation should also be considered. Identification of risk factors in the origin of the disease is very important in the diagnosis. Performing organ and system screening should focus on finding the cause and complications of diarrhea. Dehydration, decreased urination, and weight loss are among the most common symptoms. Bacteriological examination is not always justified. Patient stool should usually be performed without taking antibiotics for bacteriological examination. But now most patients are blindly approaching antibiotic therapy. At home, whether it is secretory diarrhea or invasive, start antibiotics immediately. When there are no results, they

come to the hospital in 4-5 days of illness. The analysis obtained at this time will definitely lead to an incorrect answer.

Detection of cytokines calculated by modern testing methods also showed good results in acute intestinal diseases. Cytokine testing in young children has been one of the main goals of our study. We aimed to see the patient's early diagnosis as well as the immunological changes in his or her gut. This inspection flight was performed at ADTI's MITL. Cytokines were tested in the patient's peripheral blood by immunoenzyme analysis using a test system.

Enterol was added to increase the effectiveness of treatment. Enterol was prescribed by dissolving 250 mg to 100 ml of boiling water for 8 days, while patients in this group were prescribed ersefuril 1 capsule 3 times a day for 5 days. Ersefuril is the 1st drug for secretory and invasive diarrhea. Treatment was performed in combination with antibiotics, nitrofurans, adsorbents, and rehydration therapy in patients with invasive diarrhea against the background of basic therapy. Thirty patients were treated with traditional methods of treatment according to the treatment standards of UzSV.

Results and discussion. The history of the disease in the patient or family members helps to determine the etiological factors (eg, immunodeficiency condition, cystic fibrosis, celiac disease, inflammation of the intestine). When viewed objectively, the functions of vital organs are examined for signs of dehydration (eg, tachycardia, hypotension) and fever. The presence or absence of symptoms of distress and drowsiness is evident from the general condition of the patient. A lot can be seen through the general analysis of feces. Here it can be distinguished whether the diarrhea is secretory or invasive. Based on this, the first phase of treatment should begin. Comparative diagnosis plays an important role in infectious diseases because there are many diseases associated with diarrhea syndrome. In a comparative diagnosis, of course, it is necessary to remember each of them. In infectious intestinal diseases, diarrhea syndrome occurs first, which is definitely accompanied by symptoms of intoxication. However, in most cases, the clinical symptoms of the disease atypical night take on a slightly different character. It should never be forgotten. If diarrhea syndrome is secondary to the disease rather than the underlying cause, it should be assumed that it is a mixed infection or a complication of the disease. An epidemiological history will definitely help us in this regard.

There are 4 major groups of diarrhea, which are secretory, invasive, hyperosmolar, and hyperexudative. At the first contact with the patient, we need to determine whether the patient's medical history and complaint are specific to secretory or invasive diarrhea.

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Table 1
IL-10 AND FNO-ALPHA INDICATORS

№	Cytokines	In invasive diarrhea	In secretory diarrhea	In healthy children
1	IL-10	28,8 pg / ml	13,5 pg / ml	7,7 pg / ml
2	FNO-alpha	29,4pg / ml	5,8 pg / ml	5,7 pg / ml

We observed that IL-10 was elevated in secretory and invasive types of diarrhea in children under 1 year of age. The mean value of IL-10 was 28.8 pg / ml in invasive diarrhea, 13.5 pg / ml in secretory diarrhea, and 7.7 pg / ml in healthy children. formed. The mean value of FNO-alpha was 29.4pg / ml in invasive diarrhea, 5.8 pg / ml in secretory diarrhea, and 5.7 pg / ml in healthy children. formed. According to the results of our studies, the level of cytokines in OICs was high (R <0.001).

Cytokines were slightly elevated (R <0.01) in children on a natural diet, but relatively high in interleukins (R <0.001) in mixed and artificially fed children. The data obtained reflect an increase in humoral and cellular immune activity. This suggests an important pathogenetic role of cytokines in the formation of inflammatory processes. Based on the data obtained, it causes inflammation in diarrhea

The balance between the effects of IL-10 and FNO-alpha underlies the development and outcome of the infectious process. It also predicts the duration of the disease and its long-term severe course.

In treatment, it is first necessary to know what type of diarrhea the child's general condition belongs to. Based on the recommendations of the WHO, the general practitioner of primary care (UAS) should identify types of diarrhea A, B, C and start treatment. In diarrhea A, the child is given regidron for 4 hours in a regidron drinking room set up in an outpatient setting. How to drink and how much is clearly given in the WHO recommendation. If the child's general condition improves at 4 o'clock, the house is allowed to stage 2. Explaining to the mother how to care for the child at home. This will definitely be controlled by the nurse. All work done is recorded in the child's developmental history (form -112). In diarrhea B, the child's general condition is assessed and observed in the regidron drinking room. If the situation improves, the house will be allowed to the 2nd stage. If it does not improve, it is sent to the hospital through an epidural carrier.

In diarrhea B, the patient should be treated only in an inpatient setting.

In order to compensate for the lost fluid, it is necessary to pay attention to the general condition of the patient, the number of times he returned, stool and his character. We calculate 10 ml / kg, 10 ml for diarrhea, 10 ml / kg for diarrhea, and send the fluid in the first 30 minutes of the patient's application. Then we calculate 70 x body weight (current weight of the child). In this case, the doctor decides whether to administer oral or parenteral fluid. If the patient's condition improves after 30 minutes of arrival. We send the remaining liquid orally. If further intoxication persists, we administer fluid parenterally. Enterol was added to increase the effectiveness of treatment. Enterol was prescribed by dissolving 250 mg to 100 ml of boiling water for 8 days, while patients in this group were prescribed ersefuril 1 capsule 3 times a day for 5 days. Ersefuril is the 1st drug for secretory and invasive diarrhea.

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Treatment was performed in combination with antibiotics, nitrofurans, adsorbents, and rehydration therapy in patients with invasive diarrhea against the background of basic therapy.

Table2

DEFINED NOSOLOGICAL FORMS OF THE DISEASE

№	Nosology	Detected	Complications	Detected
1.	Acute gastroenteritis of alimentary etiology	18	Level 2 dehydration	3
2.	Acute gastroenteritis of unknown etiology	22	Acute bronchitis grade 1-2 with toxicosis-excitosis	4 1
3.	Klebsiella infection-Klebsilla	3	Level 2 dehydration	3
4.	Shigellez – Shigella Flexner	3	Hemocolite of grade 1-2 with toxicosis-excitosis	2 1
5.	Acute intestinal infectionSalmonella called typhi murium	8	1-2 degree dehydration Toxicosis-excitosis with 1-2 degree TsMV infection	2 3 1
6.	Acute intestinal infection is caused by Proteus vulgaris	1		
		55		19

In the anamnesis of acute gastroenteritis with alimentary etiology, the main causative factor of the disease was an eating disorder. Healing was 2–3 days of illness.

In patients with acute gastroenteritis of unknown cause, prolonged intoxication symptoms and grade 1-2 toxicosis-excitatory complications were observed. From the epidemiological anamnesis, treatment was initiated by taking antibiotics at home. Complications were manifested during this time.

Table3

SUBJECTIVE SYMPTOMS IN PATIENTS RECEIVED ENTEROL

Indicators	The number of patients (n=70)			
	Main group 40		Control group 30	
Fever	31	77,5	16	53,3
Nausea and vomiting	37	92,5	26	86,6
Neurotoxicosis	2	5,0	6	20,0
Toxicity s with excitosis	5	12,5	8	26,6
Dehydration 1 degree	3	7,5	30	100
Dehydration 2 degrees	3	7,5	16	53,3
Dehydration 3 degrees	-	-	-	-
Talvasa syndrome	2	5,0	4	13,3

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Patients in each group were found to have a large difference in treatment duration. Symptoms in the main group of patients were eliminated more quickly than in the patients in the control group. Because in patients receiving Enterol, the direct antitoxic effect of the drug resulted in a decrease in intoxication syndrome. The detoxification effect of the drug was more pronounced in the main group of patients than in the control group in which the injectable fluid was administered.

Table 4

CHANGES OF SYMPTOMOCOMPLEXES IN PATIENTS RECEIVED ENTEROL PREPARATION

№	**Symptom complexes**		**With enterol**	**Without enterol**
1.	Intoxication	Unknown etiology	In the first 2-3 days Decreased	In 4-5 days decreased
		Alimentary etiology	In 1-2 days decreased	In 3-4 days decreased
		Known etiology	In 2-3 days decreased	In 4-5 days decreased
2.	Liquid feces	Unknown etiology	In 2-3 days condensed	In 5-6 days condensed
		Alimentary etiology	In 1-2 days condensed	In 3-4 days condensed
		Known etiology	In 3-4 days condensed	In 6-7 days condensed
3	Dehydration	Unknown etiology	In 1-2 days restored	In 3-4 days restored
		Alimentary etiology	In 1-2 days restored	In 2-3 days restored
		Unknown etiology	In 3-4 days restored	In 5-6 days restored

Significant reduction in symptoms of intoxication was observed when enterol was used with ersefuril in acute, intestinal, and etiologic forms of acute infectious diseases of unknown etiology. The results showed a positive trend in all groups of patients in the enterol-treated group in the study. However, in patients on conventional treatment, symptoms of intoxication returned more slowly than in patients receiving enterol with a combination of erefuril.

Enterol is also used to prevent antibiotic-induced diarrhea in children who are frequently ill and prone to antibiotic-induced illness. In such cases it is drunk 2 times a day for 3-5 days. Diseases of intrauterine lesions are prevented when newborns are given 1 to 3 days.

Conclusion. Thus making an accurate diagnosis in the diagnosis of acute infectious diarrhea in children of early age, knowing the types of diarrhea. Carry out pathogenetic treatment based on this diagnosis. In treatment, first of all, the algorithm of movement from simple to complex is important. The use of the drug Enterol with ersefuril increases the

effectiveness of treatment and is effective in the prevention of antibiotic-induced diarrhea and intrauterine lesions.

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